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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10 LABORATORY  
7411 Beach Dr. East  
Port Orchard, Washington 98366

December 19, 1994

MEMORANDUM

SUBJECT: Review of ESAT BNA Results for Spokane Junkyard Site,  
Samples 94464300, 94464301 and 94464302.

FROM: Joseph N Blazevich Sr., Chief  
Environmental Chemistry Section *JMB*

TO: Kevin Rochlin, Project Officer  
Spokane Junkyard Site

CC: Charles Stringer, USEPA-OCI

FULL DATA REVIEW

I have reviewed the attached data package and the corresponding raw data. Based on this review, I find that the Self Evaluation Report prepared by the ESAT contractor was conducted in accordance with the Functional Guidelines, and that the data qualifiers recommended in the ESAT contractor's evaluation are appropriate.

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10 LABORATORY  
7411 Beach Dr. East  
Port Orchard, Washington 98366

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December 19, 1994

OFFICE OF REGIONAL COUNSEL  
EPA - REGION X

MEMORANDUM

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Samples 94464300, 94464301 and 94464302.

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mw 3 BNA s o l  
mw1 BNA liquid  
mw2 BNA liquid

# ENVIRONMENTAL SERVICE ASSISTANCE TEAMS - ZONE 2

ICF Technology Inc.  
ManTech Environmental

ESAT Region 10  
ICF Technology Inc.  
Suite 1510  
1200 6th Avenue  
Seattle, WA 98101  
Phone (206) 224-4161

## MEMORANDUM

DATE: December 15, 1994

TO: Jerry Muth, Deputy Project Officer  
Joe Blazevich, Task Monitor  
Kevin Rochlin, Project Officer

FROM: Ginna Grepo-Grove, Data Reviewer, ESAT, Region 10

THROUGH: Barry Pepich, ESAT Team Manager *Barry V. Pepich*

SUBJECT: Quality Assurance Review of the Semivolatile Analyses of Samples from the Spokane Junkyard Site.

cc: Charles Stringer, USEPA

TID#: 10-9410-509

DOC#: ESAT-10B-7665

WUD#: 1501

The quality assurance review of one soil and two water samples collected from the above referenced site has been completed. The samples were analyzed for semi-volatile target compounds using a modified USEPA CLP RAS method by the USEPA Region 10 Laboratory in Manchester, WA. This data validation was conducted for the following samples listed by EPA sample code:

94464300

94464301

94464302

## DATA QUALIFICATIONS

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in the "National Functional Guidelines for Organic Data Review - 2/94" and the USEPA Region 10 Manchester Environmental Guidelines. The recommendations presented herein are based on the information provided for the review.

1. Timeliness - Acceptable

The samples were extracted within the Functional Guidelines recommended holding time for soil and water samples (14 days for soils and 7 days for waters from time of sample collection). The extracts of the samples and the associated blanks were analyzed within 40 days from the date of extraction. No qualifiers were recommended on the basis of timeliness.

2. GC/MS Tuning - Acceptable

Tuning checks were performed at the beginning of each analysis day. The data presented on each GC/MS Tuning and Mass Calibration form was compared with each mass listing, and raw data.

Calculations and transcriptions were correct. Tuning and performance criteria were met.

3. Initial Calibration

The initial calibration for all target compounds was performed on 11/07/94. The calculations were verified to be correct with the raw data. All average relative response factors (RRFs) were  $\geq 0.05$ .

The percent relative standard deviations (%RSDs) criterion of  $\leq 30\%$  were met by the target compounds and surrogates except for the following:

<u>Compound</u>	<u>%RSD</u>	<u>Qualifier</u>
2,4-dinitrophenol	47.1	J
Benzoic Acid	74.5	J

Qualifiers were not recommended for non-detects. Detected 2,4-dinitrophenol and benzoic acid were recommended for qualification.

The calibration limits were increased for the following target compounds due to not having RRFs for lower calibration standards in the calculation of the initial calibration mean RRFs:

<u>Compound</u>	<u>Calibration Limit (ng)</u>
N-nitrosodimethylamine	2.0
pyridine	2.0
2-nitrophenol	4.0
benzoic acid	16.0
hexachlorocyclopentadiene	2.0
2-nitroaniline	4.0
2,6-dinitrotoluene	4.0
3-nitroaniline	2.0

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2,4-dinitrophenol	16.0
4-nitrophenol	8.0
2,4-dinitrotoluene	4.0
diethylphthalate	4.0
4-nitroaniline	2.0
4,6-dinitro-2-methylphenol	32.0
pentachlorophenol	8.0
benzidine	4.0
butylbenzylphthalate	0.8
bis(2-ethylhexyl)phthalate	0.8
di-n-octylphthalate	2.0
3B-coprostanol	32.0

An additional compound, 3,3'-dichlorobenzidine, was analyzed at twice the concentration in each calibration level. The calibration limit was consequently 0.8 ng. The reported quantitation limits on the Form Is were adjusted accordingly.

#### 4. Continuing Calibration

The continuing calibration standard met the criteria for frequency of analysis and relative retention time (RRT) windows for all target compounds and surrogates. The RRF criterion of  $\geq 0.05$  was met for all target compounds.

The RRF percent differences (%Ds) criterion of  $\leq 25\%$  as compared to the mean RRFs from the initial calibrations was met for all target compounds except for the following:

Analysis Date	Compound	%D	Qualifier Recommended		Non-Det.
			Sensitivity	Det.	
11/30/94	2-nitrophenol	43.6	increase	J	
	benzoic acid	51.5	increase	J	
	3-nitroaniline	25.4	increase	J	
	di-n-octylphthalate	28.2	increase	J	

Sample results associated with the above compounds were recommended for qualification accordingly.

#### 5. Blanks

The frequency of analysis of the method blanks were met. Two method blanks were extracted and analyzed for each sample matrix. Only the duplicate blanks (BS4321D and BW4327D) were evaluated with the associated samples in this validation report since these blanks were analyzed immediately before the sample analyses.

The water blank contained the following target compounds:

<u>Extraction Date</u>	<u>Compound</u>
11/23/94	bis-(2-ethylhexyl)phthalate

Bis-(2-ethylhexyl)phthalate is a common laboratory contaminant. It was recommended that if detected, sample results be qualified as non-detected, "U", if sample result area integration was below ten times that found in the blanks.

Tentatively identified compounds (TICs) were present in the method blank. These TICs were recommended for deletion from the sample Form Is.

#### 6. Surrogate Recovery

All surrogate recoveries fell within the recommended recovery criteria with the exception of the following:

<u>Sample Number</u>	<u>Surrogate</u>	<u>Recoveries (%)</u>
94464300	d10-pyrene	43.74
94464300Z	d5-phenol 2-fluorobiphenyl	116.95 118.88
94464301	2-fluorobiphenyl	38.67
94464301Y	2-fluorobiphenyl	41.50
94464301Z	2-fluorobiphenyl	38.72

Since only one of the surrogates per fraction was outside the control limits, no qualifiers were recommended on this basis.

#### 7. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

The frequency of analysis of the MS/MSD was met. An MS/MSD pair (Y/Z) for each matrix was prepared and analyzed using samples 94464300 and 94464301. All target compounds were spiked into the sample aliquot at a level of 40 µg except for the following: pyridine, N-nitrosodimethylamine, aniline, benzidine, 3,3'-dichlorobenzidine, 1,2-diphenylhydrazine, 9H-carbazole, retene, caffeine, and 3B-coprostanol.

The following compounds did not meet the applied MS/MSD criteria:

QC Sample 94464300

<u>Compound</u>	<u>% Recovery (MS/MSD)</u>	<u>RPD</u>	<u>Recommended Qualifier</u>
benzoic acid	48.6/52.8	8.3	UJ
2,4-dinitrophenol	43.2/53.8	21.8	UJ

QC Sample 94464301

<u>Compound</u>	<u>% Recovery (MS/MSD)</u>	<u>Recommended Qualifier</u>
Benzoic acid	3.6/9.5	REJ
hexachlorocyclopentadiene	14.9/10.3	UJ

The results for samples 94464300 and 94464301 were recommended to be qualified as described above.

#### **8. Internal Standards Performance - Acceptable**

The data reported on the Internal Standard Area Summary form was verified with the raw data. Chromatograms, quantitation lists, and transcriptions were examined.

All analyses met the acceptance criterion for the internal standard (IS) retention time shift ( $\pm 30$  seconds from the associated continuing calibration standard) and area count (-50% to +100% of the area of the associated calibration standard).

#### **9. Compound Identification - Acceptable**

The chromatograms and quantitation lists were inspected. Sample and laboratory generated standard spectra were examined. Positive sample results reported on the Form Is were within RRT windows. All criteria were met for mass spectral ion and abundance matching or were judged acceptable.

#### **10. Compound Quantitation and Quantitation Limits (QLs)**

The raw data was examined to verify the calculation of sample results and the reported QLs. All QLs were adjusted to sample size, extract volume, and lowest level standards used in the initial calibration. Detected sample results less than the QLs were recommended by the laboratory to be qualified as estimates, "J".

Sample results were calculated against an updated daily continuing calibration standard.

**11. Tentatively Identified Compounds**

All TIC results were qualified as tentatively identified estimates, JN. A majority of the TICs for this sample were phthalate-based compounds.

**12. System Performance - Acceptable**

All of the standards, blanks and samples were analyzed in accordance with the method.

**13. Overall Assessment**

Overall, a total 4.5% of the target compound sample results were recommended to be qualified due to initial calibration - 0.6%, continuing calibration - 2.4%, blanks - 0.3%, and MS/MSD - 1.2%.

DATA QUALIFIERS

- U - The analyte was not detected at or above the reported result.
- J - The analyte was positively identified. The associated numerical result is an estimate.
- EXP - The result is equal to the number before EXP times 10 to the power of the number after EXP. As an example 3EXP6 equals  $3 \times 10^6$ .
- REJ - The data are unusable for all purposes.
- N - There is evidence the analyte is present in this sample.
- NJ - There is evidence that the analyte is present. The associated numerical result is an estimate.
- UJ - The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of the analyte in this sample.
- NAF - Not analyzed for.
- NAR - No analytical result.
- \* - The analyte was present in the sample. (Visual aid to locate detected compounds on the report sheet.)

NOTE: Data users are encouraged to contact their Regional representative within ESD to clarify or obtain further information on the appropriate use of analytical data.

# Manchester Environmental Laboratory

## Final Report

**Project Code:** TEC-637A  
**Project Name:** SPOKANE JUNKYARD  
**Project Officer:** KEVIN ROCHLIN  
**Account Code:** 955T10PTFA10A5U

**Collected:** 11/15/94  
**Matrix:** Solid  
**Sample Number:** 94464300  
**Type:** Reg sample  
**Station Description:** MW-3

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>GCMS</b>							
<b>Semi-volatiles</b>							
1,2,4-Trichlorobenzene	142	ug/kg	U	4-Chlorophenyl-Phenylether	142	ug/kg	U
1,2-Dichlorobenzene	142	ug/kg	U	4-Methylphenol	142	ug/kg	U
1,3-Dichlorobenzene	142	ug/kg	U	4-Nitroaniline	142	ug/kg	U
1,4-Dichlorobenzene	142	ug/kg	U	4-Nitrophenol	1420	ug/kg	U
2,4,5-Trichlorophenol	142	ug/kg	U	Acenaphthene	142	ug/kg	U
2,4,6-Trichlorophenol	142	ug/kg	U	Acenaphthylene	142	ug/kg	U
2,4-Dichlorophenol	142	ug/kg	U	Aniline	142	ug/kg	U
2,4-Dimethylphenol	142	ug/kg	U	Anthracene	142	ug/kg	U
2,4-Dinitrophenol	5690	ug/kg	UJ	Benzidine	284	ug/kg	U
2,4-Dinitrotoluene	711	ug/kg	U	Benzo(a)anthracene	142	ug/kg	U
2,6-Dinitrotoluene	711	ug/kg	U	Benzo(a)pyrene	142	ug/kg	U
2-Chloronaphthalene	142	ug/kg	U	Benzo(g,h,i)perylene	142	ug/kg	U
2-Chlorophenol	142	ug/kg	U	Benzo[b]fluoranthene	142	ug/kg	U
2-Cyclohexen-1-one, 3,5,5-t	142	ug/kg	U	Benzo[k]fluoranthene	142	ug/kg	U
2-Methylphenol	142	ug/kg	U	Benzoic Acid	5690	ug/kg	UJ
2-Nitroaniline	711	ug/kg	U	Benzyl Alcohol	142	ug/kg	U
2-Nitrophenol	142	ug/kg	U	bis(2-Chloroethoxy)methane	142	ug/kg	U
3,3'-Dichlorobenzidine	284	ug/kg	U	bis(2-Chloroethyl)ether	142	ug/kg	U
3B-Coprostanol	11400	ug/kg	U	bis(2-Chloroisopropyl)ether	142	ug/kg	U
4,6-Dinitro-2-methylphenol	5690	ug/kg	U	Bis(2-ethylhexyl) phthalate	142	ug/kg	U
4-Bromophenyl-Phenylether	142	ug/kg	U	Butylbenzylphthalate	142	ug/kg	U
4-Chloro-3-methylphenol	142	ug/kg	U	CAFFEINE	142	ug/kg	U
4-Chloroaniline	142	ug/kg	U	Carbazole	142	ug/kg	U

kjy

94464300 Reg sample

# Manchester Environmental Laboratory

## Final Report

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
Chrysene	142	ug/kg	U	d5-Phenol	66	%Rec	
di-n-Butylphthalate	142	ug/kg	U	Nitrobenzene-d5	74	%Rec	
di-n-octyl Phthalate	284	ug/kg	U	Phenol, 2-fluoro	77	%Rec	
Dibenz[a,h]anthracene	142	ug/kg	U	Pyrene d10	44	%Rec	
Dibenzofuran	142	ug/kg	U	Terphenol-d14	43	%Rec	
Diethylphthalate	142	ug/kg	U				
Dimethylphthalate	142	ug/kg	U				
Fluoranthene	142	ug/kg	U				
Fluorene	142	ug/kg	U				
Hexachlorobenzene	142	ug/kg	U				
Hexachlorobutadiene	142	ug/kg	U				
Hexachlorocyclopentadiene	142	ug/kg	U				
Hexachloroethane	142	ug/kg	U				
Hydrazine, 1,2-Diphenyl-	142	ug/kg	U				
Indeno(1,2,3-cd)pyrene	142	ug/kg	U				
m-Nitroaniline	142	ug/kg	U				
n-Nitroso-di-n-Propylamine	142	ug/kg	U				
n-Nitrosodimethylamine	711	ug/kg	U				
n-Nitrosodiphenylamine	142	ug/kg	U				
Naphthalene	142	ug/kg	U				
Naphthalene, 2-methyl	142	ug/kg	U				
Nitrobenzene	142	ug/kg	U				
Pentachlorophenol	1420	ug/kg	U				
Phenanthrene	142	ug/kg	U				
Phenanthrene, 1-methyl-7-(1	142	ug/kg	U				
Phenol	142	ug/kg	U				
Pyrene	142	ug/kg	U				
Pyridine	711	ug/kg	U				
1,1'-Biphenyl, 2-fluoro	64	%Rec					
1,2-Dichlorobenzene-d4	81	%Rec					
2-chlorophenol-d4	76	%Rec					

12/23/94

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Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>Semi-volatiles - Tentatives</b>							
Unknown 02	80.6	ug/kg	NJ				

# Manchester Environmental Laboratory

## Final Report

**Project Code:** TEC-637A  
**Project Name:** SPOKANE JUNKYARD  
**Project Officer:** KEVIN ROCHLIN  
**Account Code:** 955T10PTFA10A5U

**Collected:**  
**Matrix:** Solid  
**Sample Number:** 94464300  
**Type:** Matrix Spike  
**Station Description:**

Analyte	Result	Units	Qlfr
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Analyte	Result	Units	Qlfr
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**GCMS****Semi-volatiles**

1,1'-Biphenyl, 2-fluoro	103.92	%Rec	
1,2,4-Trichlorobenzene	90.54	%Rec	
1,2-Dichlorobenzene	87.95	%Rec	
1,2-Dichlorobenzene-d4	88.57	%Rec	
1,3-Dichlorobenzene	80.63	%Rec	
1,4-Dichlorobenzene	85.36	%Rec	
2,4,5-Trichlorophenol	80.32	%Rec	
2,4,6-Trichlorophenol	82.23	%Rec	
2,4-Dichlorophenol	90.69	%Rec	
2,4-Dimethylphenol	104.89	%Rec	
2,4-Dinitrophenol	43.20	%Rec	J
2,4-Dinitrotoluene	72.65	%Rec	
2,6-Dinitrotoluene	74.76	%Rec	
2-Chloronaphthalene	89.84	%Rec	
2-Chlorophenol	93.31	%Rec	
2-chlorophenol-d4	101.84	%Rec	
2-Cyclohexen-1-one, 3,5,5-t	90.30	%Rec	
2-Methylphenol	90.23	%Rec	
2-Nitroaniline	74.22	%Rec	
2-Nitrophenol	82.81	%Rec	J
4,6-Dinitro-2-methylphenol	58.89	%Rec	
4-Bromophenyl-Phenylether	93.68	%Rec	
4-Chloro-3-methylphenol	87.95	%Rec	

4-Chloroaniline	60.23	%Rec	
4-Chlorophenyl-Phenylether	90.78	%Rec	
4-Methylphenol	91.82	%Rec	
4-Nitroaniline	60.62	%Rec	
4-Nitrophenol	74.37	%Rec	
Acenaphthene	94.88	%Rec	
Acenaphthylene	92.47	%Rec	
Anthracene	94.81	%Rec	
Benzo(a)anthracene	95.59	%Rec	
Benzo(a)pyrene	91.70	%Rec	
Benzo(g,h,i)perylene	91.43	%Rec	
Benzo[b]fluoranthene	92.14	%Rec	
Benzo[k]fluoranthene	98.96	%Rec	
Benzoic Acid	48.57	%Rec	J
Benzyl Alcohol	89.59	%Rec	
bis(2-Chloroethoxy)methane	90.59	%Rec	
bis(2-Chloroethyl)ether	92.44	%Rec	
bis(2-Chloroisopropyl)ether	72.54	%Rec	
Bis(2-ethylhexyl) phthalate	84.43	%Rec	
Butylbenzylphthalate	83.37	%Rec	
Chrysene	96.21	%Rec	
d5-Phenol	97.71	%Rec	
di-n-Butylphthalate	88.72	%Rec	

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## Final Report

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
di-n-octyl Phthalate	85.00	%Rec	J				
Dibenz[a,h]anthracene	92.76	%Rec					
Dibenzofuran	90.78	%Rec					
Diethylphthalate	92.90	%Rec					
Dimethylphthalate	86.01	%Rec					
Fluoranthene	95.57	%Rec					
Fluorene	93.13	%Rec					
Hexachlorobenzene	96.14	%Rec					
Hexachlorobutadiene	92.84	%Rec					
Hexachlorocyclopentadiene	57.47	%Rec					
Hexachloroethane	76.07	%Rec					
Indeno(1,2,3-cd)pyrene	87.11	%Rec					
m-Nitroaniline	57.19	%Rec	J				
n-Nitroso-di-n-Propylamine	93.19	%Rec					
n-Nitrosodiphenylamine	94.69	%Rec					
Naphthalene	95.71	%Rec					
Naphthalene, 2-methyl	91.09	%Rec					
Nitrobenzene	89.94	%Rec					
Nitrobenzene-d5	94.76	%Rec					
Pentachlorophenol	70.75	%Rec					
Phenanthrene	95.09	%Rec					
Phenol	85.32	%Rec					
Phenol, 2-fluoro	99.69	%Rec					
Pyrene	91.87	%Rec					
Pyrene d10	97.65	%Rec					
Terphenol-d14	100.87	%Rec					

# Manchester Environmental Laboratory

## Final Report

**Project Code:** TEC-637A  
**Project Name:** SPOKANE JUNKYARD  
**Project Officer:** KEVIN ROCHLIN  
**Account Code:** 955T10PTFA10A5U

**Collected:**  
**Matrix:** Solid  
**Sample Number:** 94464300  
**Type:** Matrix Spike Dupl  
**Station Description:**

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>GCMS</b>							
<b>Semi-volatiles</b>							
1,1'-Biphenyl, 2-fluoro	118.88	%Rec		4-Chloroaniline	61.71	%Rec	
1,2,4-Trichlorobenzene	97.19	%Rec		4-Chlorophenyl-Phenylether	102.89	%Rec	
1,2-Dichlorobenzene	96.16	%Rec		4-Methylphenol	103.99	%Rec	
1,2-Dichlorobenzene-d4	100.32	%Rec		4-Nitroaniline	66.52	%Rec	
1,3-Dichlorobenzene	88.93	%Rec		4-Nitrophenol	78.42	%Rec	
1,4-Dichlorobenzene	96.82	%Rec		Acenaphthene	110.72	%Rec	
2,4,5-Trichlorophenol	99.43	%Rec		Acenaphthylene	102.91	%Rec	
2,4,6-Trichlorophenol	94.41	%Rec		Anthracene	109.52	%Rec	
2,4-Dichlorophenol	99.88	%Rec		Benzo(a)anthracene	109.10	%Rec	
2,4-Dimethylphenol	113.91	%Rec		Benzo(a)pyrene	100.25	%Rec	
2,4-Dinitrophenol	53.80	%Rec	J	Benzo(g,h,i)perylene	99.12	%Rec	
2,4-Dinitrotoluene	81.95	%Rec		Benzo[b]fluoranthene	100.33	%Rec	
2,6-Dinitrotoluene	85.29	%Rec		Benzo[k]fluoranthene	106.00	%Rec	
2-Chloronaphthalene	98.88	%Rec		Benzoic Acid	52.77	%Rec	J
2-Chlorophenol	102.21	%Rec		Benzyl Alcohol	107.16	%Rec	
2-chlorophenol-d4	120.90	%Rec		bis(2-Chloroethoxy)methane	99.60	%Rec	
2-Cyclohexen-1-one, 3,5,5-t	100.28	%Rec		bis(2-Chloroethyl)ether	102.07	%Rec	
2-Methylphenol	101.50	%Rec		bis(2-Chloroisopropyl)ether	100.59	%Rec	
2-Nitroaniline	79.04	%Rec		Bis(2-ethylhexyl) phthalate	105.67	%Rec	
2-Nitrophenol	88.39	%Rec	J	Butylbenzylphthalate	98.32	%Rec	
4,6-Dinitro-2-methylphenol	67.88	%Rec		Chrysene	109.64	%Rec	
4-Bromophenyl-Phenylether	103.46	%Rec		d5-Phenol	116.95	%Rec	
4-Chloro-3-methylphenol	100.09	%Rec		di-n-Butylphthalate	119.18	%Rec	

**Manchester Environmental Laboratory**  
**Final Report**

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
di-n-octyl Phthalate	96.46	%Rec	J				
Dibenz[a,h]anthracene	100.56	%Rec					
Dibenzofuran	100.54	%Rec					
Diethylphthalate	102.38	%Rec					
Dimethylphthalate	96.09	%Rec					
Fluoranthene	107.47	%Rec					
Fluorene	104.41	%Rec					
Hexachlorobenzene	103.03	%Rec					
Hexachlorobutadiene	99.16	%Rec					
Hexachlorocyclopentadiene	54.89	%Rec					
Hexachloroethane	86.73	%Rec					
Indeno(1,2,3-cd)pyrene	97.57	%Rec					
m-Nitroaniline	61.64	%Rec	J				
n-Nitroso-di-n-Propylamine	101.04	%Rec					
n-Nitrosodiphenylamine	104.07	%Rec					
Naphthalene	105.13	%Rec					
Naphthalene, 2-methyl	103.92	%Rec					
Nitrobenzene	92.82	%Rec					
Nitrobenzene-d5	104.33	%Rec					
Pentachlorophenol	78.37	%Rec					
Phenanthrene	107.53	%Rec					
Phenol	95.04	%Rec					
Phenol, 2-fluoro	113.91	%Rec					
Pyrene	104.08	%Rec					
Pyrene d10	115.03	%Rec					
Terphenol-d14	118.00	%Rec					

# Manchester Environmental Laboratory

## Final Report

**Project Code:** TEC-637A  
**Project Name:** SPOKANE JUNKYARD  
**Project Officer:** KEVIN ROCHLIN  
**Account Code:** 955T10PTFA10A5U

**Collected:** 11/17/94  
**Matrix:** Liquid-Diss.  
**Sample Number:** 94464301  
**Type:** Reg sample  
**Station Description:** MW-1

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>GCMS</b>							
<b>Semi-volatiles</b>							
Benzoic Acid	REJ			4-Chloroaniline	0.32	ug/L	U
1,2,4-Trichlorobenzene	0.32	ug/L	U	4-Chlorophenyl-Phenylether	0.32	ug/L	U
1,2-Dichlorobenzene	0.32	ug/L	U	4-Methylphenol	0.32	ug/L	U
1,3-Dichlorobenzene	0.32	ug/L	U	4-Nitroaniline	0.32	ug/L	U
1,4-Dichlorobenzene	0.32	ug/L	U	4-Nitrophenol	3.2	ug/L	U
2,4,5-Trichlorophenol	0.32	ug/L	U	Acenaphthene	0.32	ug/L	U
2,4,6-Trichlorophenol	0.32	ug/L	U	Acenaphthylene	0.32	ug/L	U
2,4-Dichlorophenol	0.32	ug/L	U	Aniline	0.32	ug/L	U
2,4-Dimethylphenol	0.32	ug/L	U	Anthracene	0.32	ug/L	U
2,4-Dinitrophenol	12.8	ug/L	U	Benzidine	0.64	ug/L	U
2,4-Dinitrotoluene	1.6	ug/L	U	Benzo(a)anthracene	0.32	ug/L	U
2,6-Dinitrotoluene	1.6	ug/L	U	Benzo(a)pyrene	0.32	ug/L	U
2-Chloronaphthalene	0.32	ug/L	U	Benzo(g,h,i)perylene	0.32	ug/L	U
2-Chlorophenol	0.32	ug/L	U	Benzo[b]fluoranthene	0.32	ug/L	U
2-Cyclohexen-1-one, 3,5,5-t	0.32	ug/L	U	Benzo[k]fluoranthene	0.32	ug/L	U
2-Methylphenol	0.32	ug/L	U	Benzyl Alcohol	0.32	ug/L	U
2-Nitroaniline	1.6	ug/L	U	bis(2-Chloroethoxy)methane	0.32	ug/L	U
2-Nitrophenol	0.32	ug/L	U	bis(2-Chloroethyl)ether	0.32	ug/L	U
3,3'-Dichlorobenzidine	0.64	ug/L	U	bis(2-Chloroisopropyl)ether	0.32	ug/L	U
3B-Coprostanol	25.6	ug/L	U	Bis(2-ethylhexyl) phthalate	0.32	ug/L	U
4,6-Dinitro-2-methylphenol	12.8	ug/L	U	Butylbenzylphthalate	0.32	ug/L	U
4-Bromophenyl-Phenylether	0.32	ug/L	U	CAFFEINE	0.32	ug/L	U
4-Chloro-3-methylphenol	0.32	ug/L	U	Carbazole	0.32	ug/L	U

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## Final Report

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
Chrysene	0.32	ug/L	U	d5-Phenol	43	%Rec	
di-n-Butylphthalate	0.32	ug/L	U	Nitrobenzene-d5	70	%Rec	
di-n-octyl Phthalate	0.64	ug/L	U	Phenol, 2-fluoro	56	%Rec	
Dibenz[a,h]anthracene	0.32	ug/L	U	Pyrene d10	88	%Rec	
Dibenzofuran	0.32	ug/L	U	Terphenol-d14	90	%Rec	
Diethylphthalate	0.32	ug/L	U				
Dimethylphthalate	0.32	ug/L	U				
Fluoranthene	0.32	ug/L	U				
Fluorene	0.32	ug/L	U				
Hexachlorobenzene	0.32	ug/L	U				
Hexachlorobutadiene	0.32	ug/L	U				
Hexachlorocyclopentadiene	0.32	ug/L	UJ				
Hexachloroethane	0.32	ug/L	U				
Hydrazine, 1,2-Diphenyl-	0.32	ug/L	U				
Indeno(1,2,3-cd)pyrene	0.32	ug/L	U				
m-Nitroaniline	0.32	ug/L	U				
n-Nitroso-di-n-Propylamine	0.32	ug/L	U				
n-Nitrosodimethylamine	1.6	ug/L	U				
n-Nitrosodiphenylamine	0.32	ug/L	U				
Naphthalene	0.32	ug/L	U				
Naphthalene, 2-methyl	0.32	ug/L	U				
Nitrobenzene	0.32	ug/L	U				
Pentachlorophenol	3.2	ug/L	U				
Phenanthrene	0.32	ug/L	U				
Phenanthrene, 1-methyl-7-(1	0.32	ug/L	U				
Phenol	0.32	ug/L	U				
Pyrene	0.32	ug/L	U				
Pyridine	1.6	ug/L	U				
1,1'-Biphenyl, 2-fluoro	39	%Rec					
1,2-Dichlorobenzene-d4	38	%Rec					
2-chlorophenol-d4	74	%Rec					

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**Final Report**

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>Semi-volatiles - Tentatives</b>							
1-Hexanol, 2-ethyl	0.18	ug/L	NJ				
Benzene, 1,3-dimethyl	0.23	ug/L	NJ				
Benzene, ethyl	0.17	ug/L	NJ				
Ethanone, 1-phenyl	0.37	ug/L	NJ				
Hydrocarbon unknown 01	0.17	ug/L	NJ				
Hydrocarbon unknown 02	0.21	ug/L	NJ				
Hydrocarbon unknown 03	0.17	ug/L	NJ				
Phenol, 2,6-bis(1,1-dime	0.23	ug/L	NJ				
unknown	0.27	ug/L	NJ				
Unknown 02	0.21	ug/L	NJ				

# Manchester Environmental Laboratory

## Final Report

**Project Code:** TEC-637A  
**Project Name:** SPOKANE JUNKYARD  
**Project Officer:** KEVIN ROCHLIN  
**Account Code:** 955T10PTFA10A5U

**Collected:**  
**Matrix:** Liquid-Diss.  
**Sample Number:** 94464301  
**Type:** Matrix Spike  
**Station Description:**

Analyte	Result	Units	Qlfr
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Analyte	Result	Units	Qlfr
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**GCMS****Semi-volatiles**

1,1'-Biphenyl, 2-fluoro	41.50	%Rec	
1,2,4-Trichlorobenzene	67.38	%Rec	
1,2-Dichlorobenzene	68.56	%Rec	
1,2-Dichlorobenzene-d4	48.80	%Rec	
1,3-Dichlorobenzene	67.00	%Rec	
1,4-Dichlorobenzene	70.25	%Rec	
2,4,5-Trichlorophenol	92.01	%Rec	
2,4,6-Trichlorophenol	90.30	%Rec	
2,4-Dichlorophenol	90.64	%Rec	
2,4-Dimethylphenol	79.91	%Rec	
2,4-Dinitrophenol	112.60	%Rec	J
2,4-Dinitrotoluene	94.20	%Rec	
2,6-Dinitrotoluene	99.35	%Rec	
2-Chloronaphthalene	77.96	%Rec	
2-Chlorophenol	86.85	%Rec	
2-chlorophenol-d4	85.58	%Rec	
2-Cyclohexen-1-one, 3,5,5-t	92.15	%Rec	
2-Methylphenol	86.35	%Rec	
2-Nitroaniline	94.18	%Rec	
2-Nitrophenol	90.32	%Rec	J
4,6-Dinitro-2-methylphenol	107.90	%Rec	
4-Bromophenyl-Phenylether	90.60	%Rec	
4-Chloro-3-methylphenol	91.69	%Rec	

4-Chloroaniline	88.35	%Rec	
4-Chlorophenyl-Phenylether	88.39	%Rec	
4-Methylphenol	82.08	%Rec	
4-Nitroaniline	95.25	%Rec	
4-Nitrophenol	65.80	%Rec	
Acenaphthene	87.48	%Rec	
Acenaphthylene	85.32	%Rec	
Anthracene	95.27	%Rec	
Benzo(a)anthracene	99.00	%Rec	
Benzo(a)pyrene	91.28	%Rec	
Benzo(g,h,i)perylene	94.12	%Rec	
Benzo[b]fluoranthene	94.53	%Rec	
Benzo[k]fluoranthene	91.12	%Rec	
Benzoic Acid	3.59	%Rec	J
Benzyl Alcohol	87.00	%Rec	
bis(2-Chloroethoxy)methane	87.03	%Rec	
bis(2-Chloroethyl)ether	86.90	%Rec	
bis(2-Chloroisopropyl)ether	80.98	%Rec	
Bis(2-ethylhexyl) phthalate	91.41	%Rec	
Butylbenzylphthalate	90.86	%Rec	
Chrysene	95.96	%Rec	
d5-Phenol	71.42	%Rec	
di-n-Butylphthalate	92.85	%Rec	

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**Final Report**

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
di-n-octyl Phthalate	87.91	%Rec	J				
Dibenz[a,h]anthracene	94.65	%Rec					
Dibenzofuran	91.37	%Rec					
Diethylphthalate	97.32	%Rec					
Dimethylphthalate	95.43	%Rec					
Fluoranthene	95.67	%Rec					
Fluorene	91.56	%Rec					
Hexachlorobenzene	93.71	%Rec					
Hexachlorobutadiene	67.70	%Rec					
Hexachlorocyclopentadiene	14.93	%Rec					
Hexachloroethane	63.55	%Rec					
Indeno(1,2,3-cd)pyrene	95.85	%Rec					
m-Nitroaniline	92.33	%Rec	J				
n-Nitroso-di-n-Propylamine	86.68	%Rec					
n-Nitrosodiphenylamine	85.72	%Rec					
Naphthalene	73.94	%Rec					
Naphthalene, 2-methyl	86.54	%Rec					
Nitrobenzene	88.21	%Rec					
Nitrobenzene-d5	85.34	%Rec					
Pentachlorophenol	97.94	%Rec					
Phenanthrene	93.28	%Rec					
Phenol	76.96	%Rec					
Phenol, 2-fluoro	80.32	%Rec					
Pyrene	94.29	%Rec					
Pyrene d10	89.83	%Rec					
Terphenol-d14	89.13	%Rec					

# Manchester Environmental Laboratory

## Final Report

**Project Code:** TEC-637A  
**Project Name:** SPOKANE JUNKYARD  
**Project Officer:** KEVIN ROCHLIN  
**Account Code:** 955T10PTFA10A5U

**Collected:**  
**Matrix:** Liquid-Diss.  
**Sample Number:** 94464301  
**Type:** Matrix Spike Dupl  
**Station Description:**

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>GCMS</b>							
<b>Semi-volatiles</b>							
1,1'-Biphenyl, 2-fluoro	38.72	%Rec		4-Chloroaniline	90.32	%Rec	
1,2,4-Trichlorobenzene	71.38	%Rec		4-Chlorophenyl-Phenylether	91.94	%Rec	
1,2-Dichlorobenzene	72.52	%Rec		4-Methylphenol	84.93	%Rec	
1,2-Dichlorobenzene-d4	51.11	%Rec		4-Nitroaniline	98.56	%Rec	
1,3-Dichlorobenzene	71.00	%Rec		4-Nitrophenol	75.03	%Rec	
1,4-Dichlorobenzene	74.31	%Rec		Acenaphthene	90.17	%Rec	
2,4,5-Trichlorophenol	92.95	%Rec		Acenaphthylene	89.10	%Rec	
2,4,6-Trichlorophenol	93.03	%Rec		Anthracene	97.62	%Rec	
2,4-Dichlorophenol	92.59	%Rec		Benzo(a)anthracene	103.45	%Rec	
2,4-Dimethylphenol	80.75	%Rec		Benzo(a)pyrene	93.89	%Rec	
2,4-Dinitrophenol	125.41	%Rec	J	Benzo(g,h,i)perylene	97.99	%Rec	
2,4-Dinitrotoluene	97.52	%Rec		Benzo[b]fluoranthene	95.40	%Rec	
2,6-Dinitrotoluene	102.40	%Rec		Benzo[k]fluoranthene	101.56	%Rec	
2-Chloronaphthalene	81.06	%Rec		Benzoic Acid	9.54	%Rec	J
2-Chlorophenol	89.87	%Rec		Benzyl Alcohol	90.26	%Rec	
2-chlorophenol-d4	88.55	%Rec		bis(2-Chloroethoxy)methane	89.20	%Rec	
2-Cyclohexen-1-one, 3,5,5-t	94.18	%Rec		bis(2-Chloroethyl)ether	88.85	%Rec	
2-Methylphenol	87.71	%Rec		bis(2-Chloroisopropyl)ether	83.50	%Rec	
2-Nitroaniline	96.05	%Rec		Bis(2-ethylhexyl) phthalate	96.70	%Rec	
2-Nitrophenol	94.47	%Rec	J	Butylbenzylphthalate	97.42	%Rec	
4,6-Dinitro-2-methylphenol	110.23	%Rec		Chrysene	103.36	%Rec	
4-Bromophenyl-Phenylether	95.34	%Rec		d5-Phenol	76.33	%Rec	
4-Chloro-3-methylphenol	93.59	%Rec		di-n-Butylphthalate	96.78	%Rec	

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Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
di-n-octyl Phthalate	93.10	%Rec	J				
Dibenz[a,h]anthracene	99.56	%Rec					
Dibenzofuran	92.75	%Rec					
Diethylphthalate	99.09	%Rec					
Dimethylphthalate	96.51	%Rec					
Fluoranthene	98.93	%Rec					
Fluorene	93.70	%Rec					
Hexachlorobenzene	94.87	%Rec					
Hexachlorobutadiene	71.21	%Rec					
Hexachlorocyclopentadiene	10.34	%Rec					
Hexachloroethane	67.54	%Rec					
Indeno(1,2,3-cd)pyrene	107.74	%Rec					
m-Nitroaniline	95.77	%Rec	J				
n-Nitroso-di-n-Propylamine	87.48	%Rec					
n-Nitrosodiphenylamine	87.01	%Rec					
Naphthalene	77.02	%Rec					
Naphthalene, 2-methyl	89.53	%Rec					
Nitrobenzene	90.25	%Rec					
Nitrobenzene-d5	86.62	%Rec					
Pentachlorophenol	101.77	%Rec					
Phenanthrene	98.39	%Rec					
Phenol	81.66	%Rec					
Phenol, 2-fluoro	84.10	%Rec					
Pyrene	100.20	%Rec					
Pyrene d10	92.88	%Rec					
Terphenol-d14	94.03	%Rec					

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## Final Report

**Project Code:** TEC-637A  
**Project Name:** SPOKANE JUNKYARD  
**Project Officer:** KEVIN ROCHLIN  
**Account Code:** 955T10PTFA10A5U

**Collected:** 11/17/94  
**Matrix:** Liquid-Diss.  
**Sample Number:** 94464302  
**Type:** Reg sample  
**Station Description:** MW-2

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>GCMS</b>							
<b>Semi-volatiles</b>							
1,2,4-Trichlorobenzene	0.34	ug/L	U	4-Chlorophenyl-Phenylether	0.34	ug/L	U
1,2-Dichlorobenzene	0.34	ug/L	U	4-Methylphenol	0.34	ug/L	U
1,3-Dichlorobenzene	0.34	ug/L	U	4-Nitroaniline	0.34	ug/L	U
1,4-Dichlorobenzene	0.34	ug/L	U	4-Nitrophenol	3.4	ug/L	U
2,4,5-Trichlorophenol	0.34	ug/L	U	Acenaphthene	0.34	ug/L	U
2,4,6-Trichlorophenol	0.34	ug/L	U	Acenaphthylene	0.34	ug/L	U
2,4-Dichlorophenol	0.34	ug/L	U	Aniline	0.34	ug/L	U
2,4-Dimethylphenol	0.34	ug/L	U	Anthracene	0.34	ug/L	U
2,4-Dinitrophenol	13.6	ug/L	U	Benzidine	0.68	ug/L	U
2,4-Dinitrotoluene	1.7	ug/L	U	Benzo(a)anthracene	0.34	ug/L	U
2,6-Dinitrotoluene	1.7	ug/L	U	Benzo(a)pyrene	0.34	ug/L	U
2-Chloronaphthalene	0.34	ug/L	U	Benzo(g,h,i)perylene	0.34	ug/L	U
2-Chlorophenol	0.34	ug/L	U	Benzo[b]fluoranthene	0.34	ug/L	U
2-Cyclohexen-1-one, 3,5,5-t	0.34	ug/L	U	Benzo[k]fluoranthene	0.34	ug/L	U
2-Methylphenol	0.34	ug/L	U	Benzoic Acid	13.6	ug/L	U
2-Nitroaniline	1.7	ug/L	U	Benzyl Alcohol	0.34	ug/L	U
2-Nitrophenol	0.34	ug/L	U	bis(2-Chloroethoxy)methane	0.34	ug/L	U
3,3'-Dichlorobenzidine	0.68	ug/L	U	bis(2-Chloroethyl)ether	0.34	ug/L	U
3B-Coprostanol	27.2	ug/L	U	bis(2-Chloroisopropyl)ether	0.34	ug/L	U
4,6-Dinitro-2-methylphenol	13.6	ug/L	U	<b>Bis(2-ethylhexyl) phthalate</b>	2.0	ug/L	
4-Bromophenyl-Phenylether	0.34	ug/L	U	Butylbenzylphthalate	0.34	ug/L	U
4-Chloro-3-methylphenol	0.34	ug/L	U	CAFFEINE	0.34	ug/L	U
4-Chloroaniline	0.34	ug/L	U	Carbazole	0.34	ug/L	U

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## Final Report

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
Chrysene	0.34	ug/L	U	d5-Phenol	53	%Rec	
di-n-Butylphthalate	0.042	ug/L	J	Nitrobenzene-d5	80	%Rec	
di-n-octyl Phthalate	0.36	ug/L	J	Phenol, 2-fluoro	66	%Rec	
Dibenz[a,h]anthracene	0.34	ug/L	U	Pyrene d10	91	%Rec	
Dibenzofuran	0.34	ug/L	U	Terphenol-d14	90	%Rec	
Diethylphthalate	0.34	ug/L	U				
Dimethylphthalate	0.34	ug/L	U				
Fluoranthene	0.34	ug/L	U				
Fluorene	0.34	ug/L	U				
Hexachlorobenzene	0.34	ug/L	U				
Hexachlorobutadiene	0.34	ug/L	U				
Hexachlorocyclopentadiene	0.34	ug/L	U				
Hexachloroethane	0.34	ug/L	U				
Hydrazine, 1,2-Diphenyl-	0.34	ug/L	U				
Indeno(1,2,3-cd)pyrene	0.34	ug/L	U				
m-Nitroaniline	0.34	ug/L	U				
n-Nitroso-di-n-Propylamine	0.34	ug/L	U				
n-Nitrosodimethylamine	1.7	ug/L	U				
n-Nitrosodiphenylamine	0.34	ug/L	U				
Naphthalene	0.34	ug/L	U				
Naphthalene, 2-methyl	0.34	ug/L	U				
Nitrobenzene	0.34	ug/L	U				
Pentachlorophenol	3.4	ug/L	U				
Phenanthrene	0.34	ug/L	U				
Phenanthrene, 1-methyl-7-(1	0.34	ug/L	U				
Phenol	0.34	ug/L	U				
Pyrene	0.34	ug/L	U				
Pyridine	1.7	ug/L	U				
1,1'-Biphenyl, 2-fluoro	58	%Rec					
1,2-Dichlorobenzene-d4	48	%Rec					
2-chlorophenol-d4	83	%Rec					

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**Final Report**

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>Semi-volatiles - Tentatives</b>							
Unknown Phthalate	1.00	ug/L	NJ				
Unknown Phthalate	1.4	ug/L	NJ				
Unknown Phthalate	2.4	ug/L	NJ				
Unknown Phthalate	2.9	ug/L	NJ				
Unknown Phthalate	2.6	ug/L	NJ				
Unknown Phthalate	2.4	ug/L	NJ				
Unknown Phthalate	2.0	ug/L	NJ				
Unknown Phthalate	1.7	ug/L	NJ				
Unknown Phthalate	2.1	ug/L	NJ				
Unknown Phthalate	2.2	ug/L	NJ				
Unknown Phthalate	4.7	ug/L	NJ				
Unknown Phthalate	8.7	ug/L	NJ				
Unknown Phthalate	9.1	ug/L	NJ				
Unknown Phthalate	6.0	ug/L	NJ				
Unknown Phthalate	2.0	ug/L	NJ				
Unknown Phthalate	3.2	ug/L	NJ				
Unknown Phthalate	3.4	ug/L	NJ				
Unknown Phthalate	1.6	ug/L	NJ				
Unknown Phthalate	1.6	ug/L	NJ				
Unknown Phthalate	2.3	ug/L	NJ				

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## Final Report

**Project Code:** TEC-637A  
**Project Name:** SPOKANE JUNKYARD  
**Project Officer:** KEVIN ROCHLIN  
**Account Code:** 955T10PTFA10A5U

**Collected:**  
**Matrix:** Solid  
**Sample Number:** BS4321  
**Type:** Blank  
**Station Description:**

Analyte	Result	Units	Qlfr
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Analyte	Result	Units	Qlfr
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**GCMS****Semi-volatiles**

1,2,4-Trichlorobenzene	147	ug/kg	U
1,2-Dichlorobenzene	147	ug/kg	U
1,3-Dichlorobenzene	147	ug/kg	U
1,4-Dichlorobenzene	147	ug/kg	U
2,4,5-Trichlorophenol	147	ug/kg	U
2,4,6-Trichlorophenol	147	ug/kg	U
2,4-Dichlorophenol	147	ug/kg	U
2,4-Dimethylphenol	147	ug/kg	U
2,4-Dinitrophenol	5860	ug/kg	U
2,4-Dinitrotoluene	733	ug/kg	U
2,6-Dinitrotoluene	733	ug/kg	U
2-Chloronaphthalene	147	ug/kg	U
2-Chlorophenol	147	ug/kg	U
2-Cyclohexen-1-one, 3,5,5-t	147	ug/kg	U
2-Methylphenol	147	ug/kg	U
2-Nitroaniline	733	ug/kg	U
2-Nitrophenol	147	ug/kg	U
3,3'-Dichlorobenzidine	293	ug/kg	U
3B-Coprostanol	11700	ug/kg	U
4,6-Dinitro-2-methylphenol	5860	ug/kg	U
4-Bromophenyl-Phenylether	147	ug/kg	U
4-Chloro-3-methylphenol	147	ug/kg	U
4-Chloroaniline	147	ug/kg	U

4-Chlorophenyl-Phenylether	147	ug/kg	U
4-Methylphenol	147	ug/kg	U
4-Nitroaniline	147	ug/kg	U
4-Nitrophenol	1470	ug/kg	U
Acenaphthene	147	ug/kg	U
Acenaphthylene	147	ug/kg	U
Aniline	147	ug/kg	U
Anthracene	147	ug/kg	U
Benzidine	293	ug/kg	U
Benzo(a)anthracene	147	ug/kg	U
Benzo(a)pyrene	147	ug/kg	U
Benzo(g,h,i)perylene	147	ug/kg	U
Benzo[b]fluoranthene	147	ug/kg	U
Benzo[k]fluoranthene	147	ug/kg	U
Benzoic Acid	5860	ug/kg	U
Benzyl Alcohol	147	ug/kg	U
bis(2-Chloroethoxy)methane	147	ug/kg	U
bis(2-Chloroethyl)ether	147	ug/kg	U
bis(2-Chloroisopropyl)ether	147	ug/kg	U
Bis(2-ethylhexyl) phthalate	147	ug/kg	U
Butylbenzylphthalate	147	ug/kg	U
CAFFEINE	147	ug/kg	U
Carbazole	147	ug/kg	U

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## Final Report

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
Chrysene	147	ug/kg	U	d5-Phenol	96	%Rec	
di-n-Butylphthalate	147	ug/kg	U	Nitrobenzene-d5	89	%Rec	
di-n-octyl Phthalate	293	ug/kg	U	Phenol, 2-fluoro	88	%Rec	
Dibenz[a,h]anthracene	147	ug/kg	U	Pyrene d10	95	%Rec	
Dibenzofuran	147	ug/kg	U	Terphenol-d14	98	%Rec	
Diethylphthalate	147	ug/kg	U				
Dimethylphthalate	147	ug/kg	U				
Fluoranthene	147	ug/kg	U				
Fluorene	147	ug/kg	U				
Hexachlorobenzene	147	ug/kg	U				
Hexachlorobutadiene	147	ug/kg	U				
Hexachlorocyclopentadiene	147	ug/kg	U				
Hexachloroethane	147	ug/kg	U				
Hydrazine, 1,2-Diphenyl-	147	ug/kg	U				
Indeno(1,2,3-cd)pyrene	147	ug/kg	U				
m-Nitroaniline	147	ug/kg	U				
n-Nitroso-di-n-Propylamine	147	ug/kg	U				
n-Nitrosodimethylamine	733	ug/kg	U				
n-Nitrosodiphenylamine	147	ug/kg	U				
Naphthalene	147	ug/kg	U				
Naphthalene, 2-methyl	147	ug/kg	U				
Nitrobenzene	147	ug/kg	U				
Pentachlorophenol	1470	ug/kg	U				
Phenanthrene	147	ug/kg	U				
Phenanthrene, 1-methyl-7-(1	147	ug/kg	U				
Phenol	147	ug/kg	U				
Pyrene	147	ug/kg	U				
Pyridine	733	ug/kg	U				
1,1'-Biphenyl, 2-fluoro	102	%Rec					
1,2-Dichlorobenzene-d4	89	%Rec					
2-chlorophenol-d4	93	%Rec					

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Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>Semi-volatiles - Tentatives</b>							
2-Cyclopenten-1-one, 3-m	273	ug/kg	NJ				
2-Pyrrolidinone, 1-methy	297	ug/kg	NJ				
3-Penten-2-one, 4-methyl	2980	ug/kg	NJ				
Aldol Condensate Unknown	522000	ug/kg	NJ				
Heptane, 2,5-dimethyl	331	ug/kg	NJ				
Heptane, 2,6-dimethyl	223	ug/kg	NJ				
Heptane, 3,5-dimethyl	106	ug/kg	NJ				
Heptane, 3-methylene	158	ug/kg	NJ				
Hexane, 3-ethyl	214	ug/kg	NJ				
Isobutyraldehyde, propyl	459	ug/kg	NJ				
Octane, 4-methyl	359	ug/kg	NJ				
unknown	114	ug/kg	J				
Unknown 02	177	ug/kg	J				
Unknown 03	3890	ug/kg	NJ				
Unknown 04	110	ug/kg	NJ				
Unknown 05	179	ug/kg	NJ				
Unknown 06	2660	ug/kg	NJ				
Unknown 07	342	ug/kg	NJ				
Unknown 08	198	ug/kg	NJ				
Unknown 09	118	ug/kg	J				

# Manchester Environmental Laboratory

## Final Report

**Project Code:** TEC-637A  
**Project Name:** SPOKANE JUNKYARD  
**Project Officer:** KEVIN ROCHLIN  
**Account Code:** 955T10PTFA10A5U

**Collected:**  
**Matrix:** Solid  
**Sample Number:** BS4321D  
**Type:** Blank  
**Station Description:**

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>GCMS</b>							
<b>Semi-volatiles</b>							
1,2,4-Trichlorobenzene	147	ug/kg	U	4-Chlorophenyl-Phenylether	147	ug/kg	U
1,2-Dichlorobenzene	147	ug/kg	U	4-Methylphenol	147	ug/kg	U
1,3-Dichlorobenzene	147	ug/kg	U	4-Nitroaniline	147	ug/kg	U
1,4-Dichlorobenzene	147	ug/kg	U	4-Nitrophenol	1470	ug/kg	U
2,4,5-Trichlorophenol	147	ug/kg	U	Acenaphthene	147	ug/kg	U
2,4,6-Trichlorophenol	147	ug/kg	U	Acenaphthylene	147	ug/kg	U
2,4-Dichlorophenol	147	ug/kg	U	Aniline	147	ug/kg	U
2,4-Dimethylphenol	147	ug/kg	U	Anthracene	147	ug/kg	U
2,4-Dinitrophenol	5860	ug/kg	U	Benzidine	293	ug/kg	U
2,4-Dinitrotoluene	733	ug/kg	U	Benzo(a)anthracene	147	ug/kg	U
2,6-Dinitrotoluene	733	ug/kg	U	Benzo(a)pyrene	147	ug/kg	U
2-Chloronaphthalene	147	ug/kg	U	Benzo(g,h,i)perylene	147	ug/kg	U
2-Chlorophenol	147	ug/kg	U	Benzo[b]fluoranthene	147	ug/kg	U
2-Cyclohexen-1-one, 3,5,5-t	147	ug/kg	U	Benzo[k]fluoranthene	147	ug/kg	U
2-Methylphenol	147	ug/kg	U	Benzoic Acid	5860	ug/kg	U
2-Nitroaniline	733	ug/kg	U	Benzyl Alcohol	147	ug/kg	U
2-Nitrophenol	147	ug/kg	U	bis(2-Chloroethoxy)methane	147	ug/kg	U
3,3'-Dichlorobenzidine	293	ug/kg	U	bis(2-Chloroethyl)ether	147	ug/kg	U
3B-Coprostanol	11700	ug/kg	U	bis(2-Chloroisopropyl)ether	147	ug/kg	U
4,6-Dinitro-2-methylphenol	5860	ug/kg	U	Bis(2-ethylhexyl) phthalate	147	ug/kg	U
4-Bromophenyl-Phenylether	147	ug/kg	U	Butylbenzylphthalate	147	ug/kg	U
4-Chloro-3-methylphenol	147	ug/kg	U	CAFFEINE	147	ug/kg	U
4-Chloroaniline	147	ug/kg	U	Carbazole	147	ug/kg	U

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Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
Chrysene	147	ug/kg	U	d5-Phenol	85	%Rec	
di-n-Butylphthalate	147	ug/kg	U	Nitrobenzene-d5	99	%Rec	
di-n-octyl Phthalate	293	ug/kg	U	Phenol, 2-fluoro	101	%Rec	
Dibenz[a,h]anthracene	147	ug/kg	U	Pyrene d10	58	%Rec	
Dibenzo furan	147	ug/kg	U	Terphenol-d14	56	%Rec	
Diethylphthalate	147	ug/kg	U				
Dimethylphthalate	147	ug/kg	U				
Fluoranthene	147	ug/kg	U				
Fluorene	147	ug/kg	U				
Hexachlorobenzene	147	ug/kg	U				
Hexachlorobutadiene	147	ug/kg	U				
Hexachlorocyclopentadiene	147	ug/kg	U				
Hexachloroethane	147	ug/kg	U				
Hydrazine, 1,2-Diphenyl-	147	ug/kg	U				
Indeno(1,2,3-cd)pyrene	147	ug/kg	U				
m-Nitroaniline	147	ug/kg	U				
n-Nitroso-di-n-Propylamine	147	ug/kg	U				
n-Nitrosodimethylamine	733	ug/kg	U				
n-Nitrosodiphenylamine	147	ug/kg	U				
Naphthalene	147	ug/kg	U				
Naphthalene, 2-methyl	147	ug/kg	U				
Nitrobenzene	147	ug/kg	U				
Pentachlorophenol	1470	ug/kg	U				
Phenanthrene	147	ug/kg	U				
Phenanthrene, 1-methyl-7-(1	147	ug/kg	U				
Phenol	147	ug/kg	U				
Pyrene	147	ug/kg	U				
Pyridine	733	ug/kg	U				
1,1'-Biphenyl, 2-fluoro	84	%Rec					
1,2-Dichlorobenzene-d4	106	%Rec					
2-chlorophenol-d4	96	%Rec					

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Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>Semi-volatiles - Tentatives</b>							
Heptane, 3-ethyl-2-methy	118	ug/kg	NJ				
unknown	166	ug/kg	NJ				

# Manchester Environmental Laboratory

## Final Report

**Project Code:** TEC-637A  
**Project Name:** SPOKANE JUNKYARD  
**Project Officer:** KEVIN ROCHLIN  
**Account Code:** 955T10PTFA10A5U

**Collected:**  
**Matrix:** Liquid-Total  
**Sample Number:** BW4327  
**Type:** Blank  
**Station Description:**

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>GCMS</b>							
<b>Semi-volatiles</b>							
1,2,4-Trichlorobenzene	0.70	ug/L	U	4-Chlorophenyl-Phenylether	0.70	ug/L	U
1,2-Dichlorobenzene	0.70	ug/L	U	4-Methylphenol	0.70	ug/L	U
1,3-Dichlorobenzene	0.70	ug/L	U	4-Nitroaniline	0.70	ug/L	U
1,4-Dichlorobenzene	0.70	ug/L	U	4-Nitrophenol	7.0	ug/L	U
2,4,5-Trichlorophenol	0.70	ug/L	U	Acenaphthene	0.70	ug/L	U
2,4,6-Trichlorophenol	0.70	ug/L	U	Acenaphthylene	0.70	ug/L	U
2,4-Dichlorophenol	0.70	ug/L	U	Aniline	0.70	ug/L	U
2,4-Dimethylphenol	0.70	ug/L	U	Anthracene	0.70	ug/L	U
2,4-Dinitrophenol	27.8	ug/L	U	Benzidine	1.4	ug/L	U
2,4-Dinitrotoluene	3.5	ug/L	U	Benzo(a)anthracene	0.70	ug/L	U
2,6-Dinitrotoluene	3.5	ug/L	U	Benzo(a)pyrene	0.70	ug/L	U
2-Chloronaphthalene	0.70	ug/L	U	Benzo(g,h,i)perylene	0.70	ug/L	U
2-Chlorophenol	0.70	ug/L	U	Benzo[b]fluoranthene	0.70	ug/L	U
2-Cyclohexen-1-one, 3,5,5-t	0.70	ug/L	U	Benzo[k]fluoranthene	0.70	ug/L	U
2-Methylphenol	0.70	ug/L	U	Benzoic Acid	27.8	ug/L	U
2-Nitroaniline	3.5	ug/L	U	Benzyl Alcohol	0.70	ug/L	U
2-Nitrophenol	0.70	ug/L	U	bis(2-Chloroethoxy)methane	0.70	ug/L	U
3,3'-Dichlorobenzidine	1.4	ug/L	U	bis(2-Chloroethyl)ether	0.70	ug/L	U
3B-Coprostanol	55.6	ug/L	U	bis(2-Chloroisopropyl)ether	0.70	ug/L	U
4,6-Dinitro-2-methylphenol	27.8	ug/L	U	<b>Bis(2-ethylhexyl) phthalate</b>	<b>1.6</b>	ug/L	
4-Bromophenyl-Phenylether	0.70	ug/L	U	<b>Butylbenzylphthalate</b>	<b>0.34</b>	ug/L	J
4-Chloro-3-methylphenol	0.70	ug/L	U	CAFFEINE	0.70	ug/L	U
4-Chloroaniline	0.70	ug/L	U	Carbazole	0.70	ug/L	U

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## Final Report

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
Chrysene	0.70	ug/L	U	d5-Phenol	74	%Rec	
di-n-Butylphthalate	0.70	ug/L	U	Nitrobenzene-d5	84	%Rec	
di-n-octyl Phthalate	1.4	ug/L	U	Phenol, 2-fluoro	77	%Rec	
Dibenz[a,h]anthracene	0.70	ug/L	U	Pyrene d10	93	%Rec	
Dibenzofuran	0.70	ug/L	U	Terphenol-d14	95	%Rec	
<b>Diethylphthalate</b>	<b>0.064</b>	<b>ug/L</b>	<b>J</b>				
Dimethylphthalate	0.70	ug/L	U				
Fluoranthene	0.70	ug/L	U				
Fluorene	0.70	ug/L	U				
Hexachlorobenzene	0.70	ug/L	U				
Hexachlorobutadiene	0.70	ug/L	U				
Hexachlorocyclopentadiene	0.70	ug/L	U				
Hexachloroethane	0.70	ug/L	U				
Hydrazine, 1,2-Diphenyl-	0.70	ug/L	U				
Indeno(1,2,3-cd)pyrene	0.70	ug/L	U				
m-Nitroaniline	0.70	ug/L	U				
n-Nitroso-di-n-Propylamine	0.70	ug/L	U				
n-Nitrosodimethylamine	3.5	ug/L	U				
n-Nitrosodiphenylamine	0.70	ug/L	U				
Naphthalene	0.70	ug/L	U				
Naphthalene, 2-methyl	0.70	ug/L	U				
Nitrobenzene	0.70	ug/L	U				
Pentachlorophenol	7.0	ug/L	U				
Phenanthrene	0.70	ug/L	U				
Phenanthrene, 1-methyl-7-(1	0.70	ug/L	U				
Phenol	0.70	ug/L	U				
Pyrene	0.70	ug/L	U				
Pyridine	3.5	ug/L	U				
1,1'-Biphenyl, 2-fluoro	68	%Rec					
1,2-Dichlorobenzene-d4	53	%Rec					
2-chlorophenol-d4	83	%Rec					

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Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>Semi-volatiles - Tentatives</b>							
11H-Benzo[a]fluorene	0.58	ug/L	NJ				
2-Cyclohexen-1-ol	0.44	ug/L	NJ				
2-Pentanone, 4-hydroxy-4	1.0	ug/L	NJ				
3,7,11-Tridecatrienenitr	0.89	ug/L	NJ				
3-Butyn-2-amine, 2-methy	0.66	ug/L	NJ				
unknown	1.7	ug/L	NJ				
Unknown 02	0.48	ug/L	NJ				

# Manchester Environmental Laboratory

## Final Report

**Project Code:** TEC-637A  
**Project Name:** SPOKANE JUNKYARD  
**Project Officer:** KEVIN ROCHLIN  
**Account Code:** 955T10PTFA10A5U

**Collected:**  
**Matrix:** Liquid-Total  
**Sample Number:** BW4327D  
**Type:** Blank  
**Station Description:**

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
<b>GCMS</b>							
<b>Semi-volatiles</b>							
1,2,4-Trichlorobenzene	0.70	ug/L	U	4-Chlorophenyl-Phenylether	0.70	ug/L	U
1,2-Dichlorobenzene	0.70	ug/L	U	4-Methylphenol	0.70	ug/L	U
1,3-Dichlorobenzene	0.70	ug/L	U	4-Nitroaniline	0.70	ug/L	U
1,4-Dichlorobenzene	0.70	ug/L	U	4-Nitrophenol	7.0	ug/L	U
2,4,5-Trichlorophenol	0.70	ug/L	U	Acenaphthene	0.70	ug/L	U
2,4,6-Trichlorophenol	0.70	ug/L	U	Acenaphthylene	0.70	ug/L	U
2,4-Dichlorophenol	0.70	ug/L	U	Aniline	0.70	ug/L	U
2,4-Dimethylphenol	0.70	ug/L	U	Anthracene	0.70	ug/L	U
2,4-Dinitrophenol	27.8	ug/L	U	Benzidine	1.4	ug/L	U
2,4-Dinitrotoluene	3.5	ug/L	U	Benzo(a)anthracene	0.70	ug/L	U
2,6-Dinitrotoluene	3.5	ug/L	U	Benzo(a)pyrene	0.70	ug/L	U
2-Chloronaphthalene	0.70	ug/L	U	Benzo(g,h,i)perylene	0.70	ug/L	U
2-Chlorophenol	0.70	ug/L	U	Benzo[b]fluoranthene	0.70	ug/L	U
2-Cyclohexen-1-one, 3,5,5-t	0.70	ug/L	U	Benzo[k]fluoranthene	0.70	ug/L	U
2-Methylphenol	0.70	ug/L	U	Benzoic Acid	27.8	ug/L	U
2-Nitroaniline	3.5	ug/L	U	Benzyl Alcohol	0.70	ug/L	U
2-Nitrophenol	0.70	ug/L	U	bis(2-Chloroethoxy)methane	0.70	ug/L	U
3,3'-Dichlorobenzidine	1.4	ug/L	U	bis(2-Chloroethyl)ether	0.70	ug/L	U
3B-Coprostanol	55.6	ug/L	U	bis(2-Chloroisopropyl)ether	0.70	ug/L	U
4,6-Dinitro-2-methylphenol	27.8	ug/L	U	<b>Bis(2-ethylhexyl) phthalate</b>	<b>0.44</b>	ug/L	J
4-Bromophenyl-Phenylether	0.70	ug/L	U	Butylbenzylphthalate	0.70	ug/L	U
4-Chloro-3-methylphenol	0.70	ug/L	U	CAFFEINE	0.70	ug/L	U
4-Chloroaniline	0.70	ug/L	U	Carbazole	0.70	ug/L	U

# Manchester Environmental Laboratory

## Final Report

Analyte	Result	Units	Qlfr	Analyte	Result	Units	Qlfr
Chrysene	0.70	ug/L	U	d5-Phenol	85	%Rec	
di-n-Butylphthalate	0.70	ug/L	U	Nitrobenzene-d5	91	%Rec	
di-n-octyl Phthalate	1.4	ug/L	U	Phenol, 2-fluoro	88	%Rec	
Dibenz[a,h]anthracene	0.70	ug/L	U	Pyrene d10	91	%Rec	
Dibenzofuran	0.70	ug/L	U	Terphenol-d14	93	%Rec	
Diethylphthalate	0.70	ug/L	U				
Dimethylphthalate	0.70	ug/L	U				
Fluoranthene	0.70	ug/L	U				
Fluorene	0.70	ug/L	U				
Hexachlorobenzene	0.70	ug/L	U				
Hexachlorobutadiene	0.70	ug/L	U				
Hexachlorocyclopentadiene	0.70	ug/L	U				
Hexachloroethane	0.70	ug/L	U				
Hydrazine, 1,2-Diphenyl-	0.70	ug/L	U				
Indeno(1,2,3-cd)pyrene	0.70	ug/L	U				
m-Nitroaniline	0.70	ug/L	U				
n-Nitroso-di-n-Propylamine	0.70	ug/L	U				
n-Nitrosodimethylamine	3.5	ug/L	U				
n-Nitrosodiphenylamine	0.70	ug/L	U				
Naphthalene	0.70	ug/L	U				
Naphthalene, 2-methyl	0.70	ug/L	U				
Nitrobenzene	0.70	ug/L	U				
Pentachlorophenol	7.0	ug/L	U				
Phenanthrene	0.70	ug/L	U				
Phenanthrene, 1-methyl-7-(1	0.70	ug/L	U				
Phenol	0.70	ug/L	U				
Pyrene	0.70	ug/L	U				
Pyridine	3.5	ug/L	U				
1,1'-Biphenyl, 2-fluoro	47	%Rec					
1,2-Dichlorobenzene-d4	44	%Rec					
2-chlorophenol-d4	95	%Rec					